CLAIMS

1. A method of producing a sensitizer dispersion, which comprises emulsifying and finely dividing a heat-sensitive recording sensitizer by melting under heating in an aqueous emulsifying dispersant, and then crystallizing the finely divided emulsified dispersion under rapid cooling, wherein the sensitizer is at least one member selected from the group consisting of 1,2-bis(phenoxy)ethane, 1,2-bis(3-methylphenoxy)ethane, 1,2-bis(4-methylphenoxy)ethane, p-benzylbiphenyl, di-p-methylbenzyl oxalate, and β-naphthyl benzyl ether.

2. The method of producing a sensitizer dispersion according to claim 1, wherein the emulsified sensitizer dispersion is crystallized under rapid cooling, and the temperature after the rapid cooling is 50°C or less.

3. The method of producing a sensitizer dispersion according to claim 1 or 2, wherein the sensitizer is emulsified and finely divided such that the solids content of a mixture of the sensitizer and the emulsifying dispersant becomes 10 to 65 wt%, and the average particle diameter thereof becomes 3 μm or less.

4. A sensitizer dispersion obtained by the method described in any one of claims 1 to 3.

5. A method of producing a mixed dispersion for a heat-sensitive recording material, which comprises wet-grinding the sensitizer dispersion of claim 4 and a dye for a heat-sensitive recording material or a developer for a heat-sensitive recording material.

6. A mixed dispersion of a sensitizer dispersion and a dye for heat-sensitive recording material and a mixed dispersion of the sensitizer dispersion and a developer for a heat-sensitive recording material, which are obtained by the method described in claim 5.

7. A heat-sensitive recording material comprising a heat-sensitive recording layer containing the sensitizer dispersion of claim 4 or the mixed dispersion for a heat-sensitive recording material of claim 6 formed on the surface of a support.

8. The heat-sensitive recording material according to claim 7, wherein the dye is at least one member selected from the group consisting of 3-N,N-dibutylamino-6-methyl-7-anilinofluoran, 3-N,N-diethylamino-6-methyl-7-anilinofluoran, 3-N,N-diamylamino-6-methyl-7-anilinofluoran, 3-N,N-diethylamino-7-(m-trifluoromethylanilino) fluoran, 3-(N-isoamyl-N-ethyl) amino-6-methyl-7-anilinofluoran, 3-(N-p-tolyl-N-ethyl) amino-6-methyl-7-anilinofluoran, 3-(N-isopentyl-N-ethyl) amino-6-methyl-7-anilinofluoran, 3-(N-cyclohexyl-N-methyl) amino-6-methyl-7-anilinofluoran, 3-N,N-diethylamino-6-chloro-7-anilinofluoran and 3,3-bis(4-dimethylaminophenyl)-6-dimethylaminophthalide.

9. The heat-sensitive recording material according to claim 7 or 8, wherein the developer is at least one member selected from the group consisting of 4,4'-dihydroxy diphenyl sulfone, 2,4'-dihydroxy diphenyl sulfone, 4-hydroxy-4'-isopropoxy diphenyl sulfone, bis(3-allyl-4-hydroxyphenyl) sulfone, 2,2-bis(4-hydroxyphenyl) propane, bis(4-hydroxyphenylthioethoxy) methane, bis(4-hydroxyphenylthioethyl) ether, 4,4'-cyclohexylidene diphenol, 4-benzyloxy-4'-hydroxy diphenyl sulfone, 4-allyloxy-4'-hydroxy diphenyl sulfone, benzyl p-hydroxybenzoate, 3,5-di(α-methylbenzyl) salicylic acid and its zinc salt, 2,4-bis(phenylsulfonyl) phenol, 2,4-bis(phenylsulfonyl)-5-methyl phenol, 4-hydroxy benzene sulfoanilide, a reaction mixture of toluene diisocyanate,

diaminodiphenyl sulfone and phenol,

4,4'-bis(p-toluenesulfonylaminocarbonylamino)-diphenyl methane,

p-toluene sulfonyl aminocarboanilide, α,α'-bis{4-(p-hydroxyphenylsulfone) phenoxy}-p-xylene, a dehydration condensate of a

2,2-bis(hydroxymethyl-1,3-propane diol polycondensate and 4-hydroxybenzoic acid, and 4,4'-{oxybis(ethyleneoxy-p-phenylene sulfonyl)} diphenol.